DOCUMENT RESUME

ED 025 187 48 FL 001 230

By- Clark, William H.

Using Programmed Foreign Language Courses in Secondary School With Specially Trained Teachers. Final Report.

Spons Agency- Office of Education (DHEW), Washington, D.C. Bureau of Research.
Bureau No- BR-7-0794
Pub Date 30 Sep 68
Contract- OEC-1-7-070794-5066
Note- 58p.
EDRS Price MF-$0.50 HC-$3.00
Descriptors- *Autoinstructional Programs, German, High Achievers, *High School Curriculum, Language Instruction, Language Learning Levels, *Language Research, Language Skills, *Language Teachers, Programed Instruction, Secondary Schools, Secondary School Students, Second Language Learning, Spanish, *Specialists, Student Motivation, Teacher Guidance, Teacher Role

Designed to develop information on the use of programed self-instruction in foreign languages in the secondary schools, this study indicates that high school students given the equivalent of a first-year Spanish or German course by means of programed self-instruction under the supervision of a specially trained teacher will be able to cope satisfactorily with the second-year classroom course. Following a brief description of the participants and the two-phased experiment, a commentary on the results and a summary of recommendations are presented. Detailed appendixes contain: (1) student course information, (2) seven relevant questionnaires for students, workshop participants, and administrators, and (3) teacher and participant program appraisal forms. (CW)

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BR 7-0794
PA-48

USING PROGRAMMED FOREIGN LANGUAGE COURSES IN SECONDARY SCHOOL WITH SPECIALLY TRAINED TEACHERS

Final Report

Contract No. OEC-1-7-070794-5066

Office of Education

U.S. Department of Health, Education, and Welfare

ED025187

William H. Clark

College of Education

The University of Rochester

Rochester, New York

September 30, 1968

FL 001 280

Grateful acknowledgment is made of the contributions to this cooperative effort by members of the administrative and instructional staffs in the school districts of Fairport, Penfield, Rochester (Benjamin Franklin High School), and Webster, New York. For his advice and counsel at all stages of the project thanks are due also to Professor Jerome Lysaught.

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PURPOSE

The purpose of this pilot study was to develop information which might be helpful to secondary schools in making decisions about using programmed self-instruction in foreign languages.

Introductory course programs have been published but as yet they have not been generally accepted. Mueller,[1] Morton,[2] Valdman,[3] Clark,[4] and others have reported on the more or less successful use of self-instruction by college students, but very little has been published which shows the results of using programmed foreign language courses at the secondary level. Programs still under development were used with some degree of success by high school students in studies made by Bell and McDonald[5] and by Schulze, Arendt, and Rainey.[6]

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[1]T. H. Mueller, "Programmed Language Instruction Six Years Later," in T. H. Mueller, ed., Proceedings of the Seminar on Programmed Learning, The University of Kentucky Twentieth Foreign Language Conference, Lexington, Ky., April 29, 1967 (New York: Appleton-Century-Crofts, 1968), pp. 38-49.

[2]F. R. Morton, The Lindenwood Experiment (Lindenwood College, St. Charles, Mo., 1965; USOE Contract OE-5-14-020).

[3]A. Valdman, "Self-Instruction in Language Learning," IRAL, II, 1 (April 1964), pp. 1-36.

[4]W. H. Clark, "Using Programmed Language Courses in College," in T. H. Mueller, ed., Proceedings of the (1967) Seminar on Programmed Learning, pp. 11-17. See also W. H. Clark, "Programmed German" and D. G. Reiff, "Programmed Spanish," in R. G. Pierleoni, ed., Perspectives in Programming (Rochester, N. Y.: Genesee Valley Chapter of the National Society for Programmed Instruction and the University of Rochester, 1967), pp. 30-34 and 35-37.

[5]R. Bell and P. S. McDonald, Experimental Use of Self-Instructional Courses in Russian and Spanish by Secondary School Students (Arlington County Public Schools, Arlington, Va., 1964; USOE Contract OE-3-14-033).

[6]S. Shulze, J. Arendt, and R. Rainey, A Two Year Study of the Use of Programmed Materials for the Instruction of French in High School (Minneapolis: Minneapolis Public Schools, 1966).

Shulze et al. commented (p. 24) that one of the limitations of their study may have been that the teacher involved had had no experience in the use of programmed materials. This opinion coincides with one expressed by Rushton, superintendent of the Roanoke, Virginia, public schools, in his report on the trial use of programmed materials in his district.[7] Rushton emphasized the importance of proper preparation for teachers who are to administer programmed courses. The teacher, in addition to being competent in his subject field, must also be familiar with the fundamentals of the programming process in order to choose a course wisely and use it effectively. A teacher who started out with an unfavorable attitude toward programmed learning was not likely to obtain good results, and the results would also be affected by the attitudes of pupils, parents, and school administrators. Unfortunately, Rushton published no data on the use of foreign language programs.

The importance of the teacher's attitude is also stressed in a standard work by Lysaught and Williams.[8] They suggest that a teacher is not likely to use programmed instruction, or, if he does use it, will not do so to best advantage until he "has done some programming and demonstrated to himself that he can control this new pedagogical method."

Our purpose, then, was to make a pilot study of programmed foreign language courses used under supervision of specially trained teachers.

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[7]E. W. Rushton, Programmed Learning: The Roanoke Experiment (Chicago: Encyclopaedia Britannica Press, 1965).

[8]J. P. Lysaught and C. M. Williams, A Guide to Programmed Instruction (New York: Wiley, 1963), p. 23.

This does not necessarily imply that schools will wish to substitute self-instruction for classroom instruction. But it does recognize that any school will want some indication in advance that the instruction will be adequate in terms of its curriculum, before it will install a programmed course.

The specific question set for this study was this: If high school students are given approximately the equivalent of their first-year course by means of programmed self-instruction, under the supervision of a teacher who understands what is involved and is thoroughly familiar with the materials being used, will they be able to cope satisfactorily with the second-year classroom course?

CONDUCT OF THE STUDY

The plan in general was that during a six-week university summer session, training would be provided for a small group of high school foreign language teachers, while at the same time students from their schools worked through an introductory programmed course under the supervision of persons familiar with theory and techniques of programmed instruction. After the summer the supervisory function would be taken over by the high school teachers, who would observe the progress of these students in the second-level classroom course, and stand ready to give them help if and when needed. In addition to measuring and reporting on pupil achievement, the study was to investigate attitudes toward programmed instruction on the part of the students, teachers, and school administrators involved.

Participants

Commercially available programmed courses in German and Spanish have been used as first semester courses on a self-instructional basis at the University of Rochester since 1964. Experienced staff, equipment, and facilities to accomodate as many as thirty students simultaneously were thus available to the project.

Schools in the area were invited to participate in the project, with the understanding that each school would send to the summer session a group of students, all of whom would be beginners, and a teacher of the same language (either German or Spanish) which that group intended to study. The only requirements of the students were that they be willing

to spend the necessary time (up to four hours per day), stay with the course for the six-week summer session, and continue in the second-year classroom course in the fall. The participating teachers were required to attend two special three-week workshops during the summer, observe the pupils from their respective schools, and stand ready to give them help when needed during the second-year course.

Considerable interest was shown by the schools, but because of resignations and other commitments of their teachers', eventually only one city school and three suburban schools were able to take part in the project. Two of the four available teachers happened to be in German, two in Spanish. A total of nineteen students from these schools volunteered; only seventeen are discussed in this report, since the other two did not meet the requirements (one, although highly successful in the programmed course, was unable because of his schedule to continue in the second-year course; the other failed to spend the required time on the programmed course and did not complete it). The seventeen students ranged in age from fourteen to seventeen years at the beginning of the summer. Two had completed the eighth grade, seven the ninth, seven the tenth, and one the eleventh. Three were boys, fourteen were girls. Their previous foreign language study ranged from none (two pupils) to eight or nine years (three pupils). Three came from the city school; the others were distributed more or less evenly among the suburban schools.

Phase One: Programmed Courses and Teachers' Workshops

Administration of the programmed course. The plan called for specially trained teachers to work with the high school students.

Obviously the participating high school teachers were not in a position at the beginning of the project to function in this capacity, so the project staff included two teaching assistants, one for the German and one for the Spanish group. Both are holders of master's degrees, have studied programmed learning in university courses, and are thoroughly familiar with the programs used in the project. They were expected to supervise the pupils, seeing to it that they received materials currently and progressed in their work; to see that pupils did not spend too much time uninterruptedly; to answer students' questions, including giving cultural information not specifically connected with the materials where this was appropriate; to monitor students' pronunciation and help the worst performers to pronounce at least understandably; to keep notes of individual pupils' difficulties; to give periodic tests; and to make an assessment of each pupil's achievement, at the end of the course. They were expressly told that they were not "instructors" in the usual sense, that the programmed materials were doing the teaching, and that their general function was to facilitate the pupils' learning.

The courses used in the project, Sapon's Spanish A and Spanish B and Ellert's German A (for detailed descriptions see Appendix A), are presented in sets of programmed books accompanied by coordinated tapes. The electronic equipment used was in the form of "Audio Notebooks" (Electronic Futures, Inc.), compact tape players each supplied with an audio-active headset and a foot switch. Space for the learning activities was provided in the "Programmed Learning Studio" of the University's

Department of Languages and Linguistics. This consisted of two rooms arranged as a "library-type" language laboratory; the German group worked in one room, the Spanish in the other.

The pupils had been told in advance that they would be required to work in the Studio five days a week for six weeks, spending up to four hours a day exclusive of interruptions for rest, recreation, and lunch (see Appendix B). As it turned out, the students were able to complete their courses in 24 days of attendance from June 26 through July 31. The average time spent per day was about three hours; between 2.0 and 3.4 hours for the German group, between 2.8 and 3.8 hours for the Spanish.

Each pupil submitted, at the end of each day, a form showing the number of minutes spent during the day in working with the programmed materials. It was noted that several of the Spanish pupils indicated rather long stretches of time without interruptions; and it is of course possible that they did take time out without indicating the fact, in which case the figures for the Spanish group may be somewhat inflated.

The assistants in the two groups used periodic tests to follow the progress of the students. In the case of the German course, the tests used had been prepared by one of the authors of the course and voiced by a native speaker for use with the college students; there were five of these tests. The Spanish tests, six in all, were prepared by the assistant in charge. They made use of discrimination frames from the program, questions based on material presented orally and through pictures, and "translation." With the German group, test recordings of pupils'

pronunciation were made in the second and third weeks, and the results discussed with the pupils. MLA-Cooperative Foreign Language Tests were given to all pupils on completion of the programmed courses.

The instruction was in principle and in fact supplied mainly by the programmed materials themselves. Extra attention was given only when pupils requested it or when (in the case of the Spanish group) the assistant judged that some repetition of frames would be helpful. The German assistant estimated that no one in her group had received more than ten minutes of personal attention of this kind during the whole session. In that group, some duplicated sheets were prepared to summarize grammar points and vocabulary, but only when these were requested by the pupils.

A negligible amount of supplementary "cultural" exposure was provided in the groups. In the case of the German, some short sound films were presented on one occasion; the pupils expressed their enjoyment but also were somewhat frustrated by their inability to understand the sound track. In the case of Spanish, there were informal, impromptu "cultural discussions" with the assistant when pupils expressed curiosity.

Orientation of teachers. The teacher participants began their summer's work in a three-week workshop (five days a week from 9:00 to 3:00) which introduced them to programming principles. This workshop, also given as a one-semester course during the academic year, is the present version of the pioneering programming course offered for the first time at the University in 1961. It gives a comprehensive introduction to the theories and techniques of programmed instruction, and requires the participant to construct, analyze, and revise a self-instructional programmed sequence in his own special field.

After their "basic training," the four teachers took part in a second workshop under the direction of the project director. Again, the workshop lasted for three weeks, five days a week, 9:00 to 3:00. Here the activities were as follows:

1. Study of the professional literature dealing with programmed instruction in foreign languages, especially basic surveys, reports of research and development, and journal articles of a detailed nature.

2. Intensive study of the programmed materials being used during the summer by their own students.

3. Acquiring some familiarity with programmed courses other than those in 2. above, through examination of the course materials, and of the "Program Information Sheets" issued by the Clearinghouse for Self-Instructional Language Materials.

4. Observation of pupils working with the programmed materials.

On the basis of the activities described, the teachers (those in each language working as a team) produced the following:

A. A list of behavioral objectives for the first-year course in their specialty language, starting from a general statement by Nelson Brooks in the C.E.E.B. Colloquium on Curricular Change of 1963.

B. A comparison of the content of the individual program with A. above, and with the content of the textbooks currently in use in first-year courses in their schools.

C. A set of suggestions for areas of language learning to which special attention might have to be given when the pupils proceeded to the second-level classroom course.

D. A general criticism of the programmed course in use by their students, with relation to A., B., and C. above.

Phase Two: The Follow-up

At the end of the summer session the assistants made an assessment of each pupil's achievement and provided detailed comments concerning his strengths and weaknesses. These were transmitted to the schools along

with the teachers' memoranda concerning the programmed courses and their relation to the second-level courses in the respective schools. On the basis of this information, and taking into account students' academic records and their other commitments, the schools made the following placements: four students who had used the Spanish program were to go to a first-year course, five to second-year courses; the eight students who had completed the German program were assigned to second-year courses. In September one of the Spanish students took advantage of an opportunity to change to the third-year course, and one of the German students changed to a third-year course in January.

In each of the four schools one of the workshop participants was available to observe and assist students from the programmed course; in two schools the second-year course was taught by the project participants. The German students in one school had some help in the fall, and one Spanish student was coached weekly throughout the year, but the others received no special help during the transition or afterward.

The teachers were interviewed at the end of the first semester by the project director concerning the students' problems and achievement. Course grades for all students were collected after the first semester and at the end of the year. Questionnaires were administered to teachers, administrators, and students at the end of the year, when teachers were asked to submit a short account of each pupil's problems, strengths, and weaknesses in the follow-up course (see appendices under appropriate heading).

RESULTS AND COMMENTS

The most obvious of the immediate results of this study is that thirteen of the seventeen students went into advanced courses immediately after completing the programs and were successful in those courses. At the end of the first semester they were doing satisfactory, in several cases excellent, work. The "gap," such as it was, between their preparation and that of their classmates was filled comfortably, and with very little extra attention on the part of the teachers. By the end of the year eleven had finished their second-level courses with satisfactory grades or better, and two had completed third-level courses with final grades of 95 and 97 respectively (see Table I, and teachers' comments in Appendix F).

The achievement of these students is not surprising in view of the scores they had made on MLA-Cooperative tests at the end of the programmed courses. Table I shows the scores as percentile rankings compared with a national sample of high school students in audio-lingual classes at the end of the first year.

A more detailed idea of the situation during the year in the respective schools can be gained from the reports which the classroom teachers gave when interviewed at the end of the first semester, at the middle of Phase Two. With respect to the four language skills, teachers reported that the overall performance of the "average" project pupil was above average in speaking and reading, good in writing, and very good in listening. Ten of the thirteen were "excellent" in listening comprehension, six were "excellent" in speaking, two were "excellent" in reading,

TABLE I

STUDENT APTITUDE, ACHIEVEMENT, AND RELATED INFORMATION

Pupil[1]	School	Year	Age	MLAT[2]	Time[3]	Coop. Tests[4] L	S	R	W	DAT[5]	HSA[7]	Course Grades[8] Fall	Exam	Year
Level III														
G-4	A	11	16	167	78	86	88	48	65	-[6]	91	95	100[9]	97
S-2	A	11	17	147	72	73	66	91	81	97	91	100	94[9]	95
Level II														
S-1	A	11	15	144	67	82	53	66	63	99	86	100	94	99
G-8	B	11	16	129	54	65	69	48	58	75[6]	86	94	90	92
S-5	A	12	17	109	79	76	34	76	63	-	86	94	81	90
G-3	B	11	15	131	50	82	27	68	58	95	91	89	86	88
G-1	B	11	15	134	49	82	36	84	58	95	93	84	85	85
S-3	A	10	15	111	80	64	74	87	38	-[6]	89	89	76	85
G-6	B	11	16	106	67	50	36	54	47	80	81	77	84	81
G-5	C	9	14	110	71	65	44	20	58	70	B	B	72	C
G-7	C	10	14	95	54	73	52	20	29	97	C+	C	65	C
G-2	C	9	15	73	82	50	01	10	13	75	B	C+	65	C
S-4	D	10	15	130	84	82	74	11	29	90	81	70	62	71
Level I														
S-8	A	10	15	127	73	28	53	76	29	97	87	9[illegible]	92	94
S-9	D	10	15	72	92	28	24	47	29	75	75	78	67	75
S-6	D	10	14	64	87	22	34	11	18	55	66	70	65	66
S-7	D	10	15	77	88	09	34	22	18	50	72	64	57	59

1. G indicates a student in German, S in Spanish.
2. Modern Language Aptitude Test raw scores at start of Phase One.
3. Total number of hours to complete the programmed course.
4. Mid-percentile rankings in MLA-Cooperative Listening, Speaking, Reading and Writing subtests, compared with national sample of pupils near the end of first-year high school audio-lingual classes. (Publisher defines "audio-lingual" as classes in which no less than 50% of time was spent in the FL, no more than 15% in translating English to FL or FL to English, no more than 10% in grammar discussions in English.)
5. Percentile for composite of Verbal and Numerical scores on Differential Aptitude Test.
6. No DAT score available.
7. Student's overall high school average, Grade 9 to Term II 1968. Equivalents of letter grades are A = 93 - 100, B = 85 - 92, C = 75 - 84.
8. Grades in follow-up course for Term I 1967-68, final examination June 1968, and year ending June 1968.
9. New York State Regents examination (assumes completion of three years).

and two in writing. In general the German pupils were better in listening and speaking than in reading and writing. The Spanish pupils, while also most proficient in listening comprehension, were rated somewhat higher in writing than in speaking or reading.

The majority of Spanish pupils were in School A (one of them in Level III), where the teacher reported that they had started the term intending to have weekly review sessions with the summer workshop participant, but decided after two weeks that these sessions were unnecessary. Since that time, no students had come for extra help. Minor problems in vocabulary and structure were mastered nicely. The teacher's impression was that all five of these pupils were above average in aptitude and interest. She believed they had received a real advantage from the program in their training in pronunciation.

The one second-level Spanish pupil in suburban School D, however, was progressing with difficulty. S-4 had begun the term in Spanish I and then asked to be transferred to Spanish II; the teacher felt that this had been a mistake. S-4, although receiving help weekly from the workshop participant (an arrangement that continued throughout the year), was having difficulty in keeping up with the rest of the class, according to the teacher. The teacher felt that this pupil, with only the programmed course as a substitute for the first-year classroom course, was at a disadvantage in her second-year course.

Pupil G-4, in School A, was consistently out-performing all classmates and was permitted to transfer to German III for the second term. For three weeks at the beginning of the year G-4 had received help from

the teacher with a review book and the laboratory tapes for the first-year course; after the third week there had been no extra help. The teacher felt there had been no disadvantage whatsoever from starting with the programmed course.

The four German pupils in School B were also doing well. In general they were well ahead of their classmates in all skills; their teacher thought they had better study habits and were more willing to use and work with the language than their classmates. A minor disadvantage in lack of vocabulary was easily handled by the "review" in which they participated. This consisted of spending about half an hour each day throughout the first term in the laboratory, going over materials studied by their classmates during the preceding year. Otherwise the teacher had given no extra help. The main problem for this group was the feeling of being held back by their classmates. This was resolved in the second term by their being permitted to work together as a separate small group; all but one (G-6) did this.

The three German pupils in School C were receiving satisfactory, though not high, grades. G-2, whose language aptitude test score was the lowest among the thirteen, was to some extent making up for the presumed deficiency by hard work. No extra help was given. As a matter of fact, these pupils had a general advantage over their classmates because of the program's "thorough training in fundamentals," as the teacher put it. The project pupils were surer of themselves in all phases of the language, partly because the others had had two different German teachers in their first year course. These project pupils also felt the contrast between the rate of progress to which they had been accustomed in the programmed course and that made in the classroom course.

None of the participating schools had begun to make use of programmed foreign language courses at the time this report was written, but the attitude shown by teachers and administrators in their response to questionnaires was favorable at the outset, and no less favorable at the conclusion of Phase Two. The four teachers who had participated in the workshops all expressed themselves as "very favorable" toward using programmed instruction in beginning foreign language courses. One department chairman wrote, "The success of our students [who took part in the project] leaves no other choice."

Questionnaire replies showed that the seven administrators were <u>all</u> in favor of using programmed courses "as an alternative course for highly-motivated and gifted students, as self-instruction primarily." Several thought they would be likely to recommend programmed learning for use with individual students or a group smaller than minimum class size; as a home study course for ill or otherwise handicapped students; as an alternative course when scheduling prevents the student from enrolling in a classroom course; or to provide the teacher with time for individualized and advanced instruction, by freeing him from mechanical drill. Three administrators thought they would recommend its being used in their schools in individual study for disadvantaged students who do not respond well to a competitive classroom situation; as an alternative course to allow the slow student to go at his own pace, with some help from a teacher; or as an alternative "repeat" course for students unsuccessful in the regular introductory course. "As the need for individualized instruction increases, this type of training will be of tremendous value," one of the administrators commented.

The pupils who took part in this project also showed in questionnaire responses that they were satisfied with the programmed courses. A majority said they would recommend to their friends the courses they had taken. They preferred to work independently but not in isolation. Self-pacing seems to be the feature that pleased them most, but a majority would also have liked regular group meetings with the supervising teacher for "guided conversational practice." The students were almost unanimous in saying that what they liked <u>least</u> about the programmed courses was the headsets (a feature that should not be impossible to improve).

A review of the participants' comments and other information obtained in this study prompts two suggestions for schools interested in using programmed courses:

1. That the course be selected after careful consideration of the programmed courses currently available as to their behavioral objectives, content, degree of emphasis on audio-lingual skills, and specific evidence of their effectiveness.

2. That the supervising teacher be thoroughly familiar with the course to be used and with programmed learning in general. Workshops and courses are offered in university centers during the academic year and in the summer, so that this recommendation is not difficult to follow. The teacher should be given the necessary authority and time to supervise the course.

SUMMARY AND RECOMMENDATIONS

There is some evidence that programmed self-instruction in foreign languages can be used successfully by high school students. From several sources has come the suggestion that a self-instructional course is more likely to be effective if it is used under the supervision of a teacher who is thoroughly familiar with the course and with the principles of programmed learning. The present study combined the use of programmed courses by high school students with the training of teachers from the same schools, who would then be available to supervise the administration of programmed courses if their schools should decide to use them.

During June and July 1967, volunteer pupils from four public high schools began studying German (eight pupils) or Spanish (nine pupils), working intensively for five weeks with commercially available programmed courses. It was hypothesized that this introduction would be adequate to permit the pupils to continue successfully with the second-level classroom course in their schools in the following academic year. Supervision by trained assistants was provided.

After the summer course, students' performance was evaluated through results of standardized tests in the four language skills and through the assistants' ratings. The majority were placed by their schools in second-level courses for the academic year 1967-68; eight pupils in German and five in Spanish were so placed. All but one of these pupils performed satisfactorily or better, with little or no help from the teacher. Two of them were transferred to the third-year course during the year and each earned an A for that course. The thirteenth pupil

scored a D for the year, after receiving special tutoring regularly and frequently. It should be noted that all thirteen students had general high school averages of 80 or better; whereas, of the students who did not go on to the second level course, three out of four had general averages of 75 or below and Modern Language Aptitude Test scores which ranked them between the 25th and 40th percentiles for their grade and sex.

Responses to a questionnaire at the conclusion of the project showed administrators and teacher participants favorably inclined toward the use of programmed introductory foreign language courses, but most of the administrators said that decisions which they might make about the use of such courses would be deferred until after the date of this report.

Obviously the number of pupils involved in this study is small; it must be emphasized that they were all volunteers, that those who were successful were good students in other courses, and that a Hawthorne effect may have played a part in their performance, especially in their completing the programmed courses in a minimum of 54 and a maximum of 84 hours. Moreover, there is no way of knowing to what extent the administration of the courses by specialists may have affected the students' achievement. The only conclusion to be drawn is that thirteen of the seventeen students who completed a programmed introductory course in the project were able to cope with a second-level classroom course in the following year.

Further research should explore the effectiveness of other programmed courses in foreign languages, of programmed courses used by students with differing characteristics (with respect to aptitude, motivation, and age, for example), of programmed instruction using more than one mode of

presentation (e.g., television screen and loudspeaker alternating with books and headset), of programmed courses used at home, supplemented by group meetings; and the effects of varying the amount of supervision by a teacher, of "fast" versus "slow" pace, and of various combinations of group presentation with individual study.

This project neither sought nor found any final answers, but the information which it has provided may encourage secondary schools to make their own trial use of programmed courses for elementary foreign language learning. If more schools show a willingness to use programmed instruction, it seems likely that more effective course programs will be developed and improved techniques of using them will be found.

APPENDIX A

DESCRIPTIONS OF THE PROGRAMMED COURSE MATERIALS

(All of what follows in Appendix A, including the explanatory remarks, is quoted with permission from the collection of "Program Information Sheets" issued by the Clearinghouse for Self-Instructional Language Materials in the Center for Applied Linguistics, Washington, D.C.)

The descriptive information sheets have been compiled by the Clearinghouse in order to provide potential program users and other interested persons with some detailed information on the programmed materials available... .

These descriptions are not intended to provide evaluations of the quality of the programs, since evaluation implies a detailed analysis of the programming techniques and content, and consideration of results of carefully controlled administrations of the programs. Rather, these notes are designed to give objective information on the program's content, aims, proposed student level, completion time and other subjects to help potential users make preliminary decisions about whether a program is appropriate for their purposes.

The following code letters and combinations have been used to indicate the sources of information in the Program Information Sheets:

P: Publisher

A: Author

P/A: Publisher or author or both. This notation generally refers to information provided in publicity releases on the program, in which the source cannot be more precisely specified.

CS: Content specialist.

A, CH: Primary source is program author, information has been edited or supplemented by Clearinghouse staff.

Title: Elementary German - A

Prepared by: Ernest E. Ellert, Lois V. Ellert and M. W. Sullivan

Publisher, edition, and program availability: Published by Encyclopaedia Britannica Press, Inc. 1961. Commercially available from Behavioral Research Laboratories, Box 577, Palo Alto, California. Copyright 1966.

Cost: Text (15 volumes): $20.00
Tapes (set of 12): $115.00
Teacher's Manual: $1.00
Test Booklet: $ .96

Format, presentation device, program reusability: Integrated tapes and programmed text: text presented in TEMAC binder, tapes require a tape recorder with a pause button or preferably foot pedal controls. Students can write their answers on separate sheets, so program could be reused.

Content and terminal objectives: The lexical content of the course is not designed to cover any specific subject matter. The course covers the simple tenses of the indicative, the four cases of articles and nouns, the singular and plural of nouns, and pronouns and the endings of adjectives. The terminal objectives are: the ability to understand, speak, read, and write simple cultured German; to form a solid base for the presentation of more advanced material; a vocabulary in excess of 500 words; a firm grasp of simple grammatical structures and to free the teacher from purely mechanical drill work. All skills are equally emphasized. (P)

Program organization: The course is not divided into distinct lessons. There are recurrent patterns of frame sequences, e.g., repetition, discrimination, introduction of meaning, copying, reading, dictation and translation. The course contains 5,050 frames. At the completion of each set of 26 new vocabulary items a list of these items is presented in the order of their appearance in the text. The student is asked to make sure that he knows all the vocabulary items before he proceeds any further. At the end of each volume of programmed text (there are 10 volumes) all the vocabulary items are listed in alphabetical order, the student is asked to review them. The student receives training in understanding, speaking, reading, writing and translating concurrently.

Response characteristics: All written responses are in German, these include copying, dictation, filling blanks and translation. English oral responses are required for translation and vocabulary.

Student population, course level prerequisites: Introductory course, for use with high school and college students. It is equivalent to one year of high school or one term of college German. (P)

Completion time: When used as a self-contained course:
Gifted students: 90-100 hours
Average students: 120 hours
Slower students: 150-175 hours (P)

Suggested uses: As a laboratory course with teacher-supervised drill sessions. (P)

Tests or supplementary materials included with program: A Test Booklet and Teacher's Manual are available. This course may be followed by German B by the same authors.

Title: Spanish A

Prepared by: Stanley M. Sapon

Publisher, edition, and program availability: Published by Encyclopaedia Britannica Press, 1961. Commercially available, from Encyclopaedia Britannica, Educational Corp., 425 N. Michigan Avenue, Chicago, Ill. 60611.

Cost: Text and TEMAC Binder: $29.25 Tapes: $200.00
Teacher's Manual: $ .20

Format, presentation device, program reusability: Integrated tape and programmed text. Text presented in TEMAC binder. Tapes require tape recorder, preferably operated by foot pedal. Audio-active earphones required; student does not record his responses. Program reusable.

Content and terminal objectives: Primary emphasis is placed on the spoken language. The terminal objectives for the course are stated in detail in the Teacher's Manual. Some of these are: ability to respond to a natural rate of Spanish speech; good to near-native pronunciation; ability to read aloud without impairing aural-oral level; ability to write at the level of a Spanish first or second grader; about 500 vocabulary items. Structure: 90+% accuracy in number-gender agreement (in both noun-adjective-pronoun and subject-verb-predicate constructions); basic patterns of affirmation, negation, interrogation; present tense of verbs. (A, CH)

Program organization: 6,592 frames, divided into 60 units. Each unit requires 50-85 minutes for completion and can be completed either in one session or several. (P/A) Discrimination training and oral comprehension and production are taught first; written language not introduced until after 3,000 frames (in Unit 29).

Response characteristics: Responses are both oral and written; format includes multiple choice, matching, constructed responses, frequently in combination. Oral responses include repeating Spanish sounds, words, phrases in chorus with or after taped voice; translation (English-Spanish and Spanish-English); reading aloud; answering questions. Written responses, both writing full sentences and completing blanks, include translation (Spanish-English and English-Spanish), written answers to questions; writing from dictation.

Student population, course level, prerequisites: Introductory course, for high school (possibly junior high school) or college students.

Completion time: 50-85 hours (P/A)

Suggested uses: The course is entirely self-instructional, but the author suggests two main alternative ways of using it:

1) students work steadily on program to a target unit somewhere between Units 50 and 60, then divide their time between work with teacher on conversation, vocabulary, new patterns, etc., and individual work with programmed materials.

2) students spend 3 or 4 days a week working on program, spend the rest of the class time each week in instruction by the teacher, in English, on Spanish and Latin American culture. (A, CH)

Tests or supplementary materials included with program: No tests included. Teacher's Manual is available.

Developmental research reports and other literature relating to program: Stanley M. Sapon. Some reflections on models of linguistic structure and language programming. In Programming of audio-lingual language skills for self-instructional presentation. Volume VI of Publications of the Language Laboratory, Series Preprints and Reprints. University of Michigan. 1961.

Title: Spanish B

Prepared by: Stanley M. Sapon

Publisher, edition, and program availability: Published by Monopress, P.O. Box 8341, Rochester, New York 14618. Commercially available.

Cost: Text (set of two volumes): $7.00
Tapes (7" reels at 3-3/4 ips): $42.00

Content and terminal objectives:

The following description of the course has been provided by Professor Sapon:

> "The oral skills developed in Spanish A are maintained at high strength and further extended with a particular eye towards increasing the reliability of oral production under the control of orthographic stimuli.
>
> "The student is brought to the use of fully normal orthography. One of the results of this orientation is the ability to introduce novel material visually with less dependence on auditory models.
>
> "The lexicon adds approximately 700 items, and verb morphology includes the following tenses; periphrastic future, the present perfect, and the preterite in the indicative; the present and imperfect subjunctive; and the polite command forms. The above variations appear in both regular and irregular verbs and with reflexive verbs as well.
>
> "Training is given in the discrimination of ser and estar, and the intimate forms of the verb are introduced.
>
> "Distinction is made between Iberian and Latin American pronunciation, and the student is given opportunity to listen and respond to Latin American Spanish."

Student population, course level, prerequisites: The program is designed to be used by students who have completed Spanish A.

Completion time: ". . . the average completion time is around 25 to 30 hours." (A)

Suggested uses: Not stated.

Tests or supplementary materials included with program: None included.

Developmental research reports and other literature relating to program: None.

APPENDIX B

INFORMATION GIVEN TO PROSPECTIVE STUDENT PARTICIPANTS

About the Special High School Foreign Language Project

What is it?

The summer project is designed to give high school students a good start in their foreign language learning, with the expectation that they will be able to continue in September in the second-year high school course. The students, a teacher from their own school, and the staff of the project will be working together to achieve the best possible result.

The project, in German and in Spanish, uses the techniques of "programmed learning," with which some of you may be familiar from its application to other school subjects or in industry. The materials are ones that have been used successfully in both high school and college; they have been used as complete first-semester courses at The University of Rochester for the past three years.

What is required of the student?

The only requirements for acceptance in the project, other than having been selected by school authorities, are that the student be willing to spend the necessary time, stay with the course for the six-week summer session (June 26 to August 4), and continue in the second-year classroom course in his school in the fall.

What will the student be doing?

The students will be working with tape recorders and programmed books in the laboratory on the campus for five days a week (except July 3 and 4), Monday through Friday. They will spend up to four hours a day, with breaks, working through the programmed course under the supervision of members of the project staff. The laboratory will be open from 9:00 to 12:00 and from 1:00 to 3:00, providing time for recreation and lunch. Students should expect to arrive each day at the laboratory not later than 9:30 a.m. The project does not provide transportation or lunch; lunch can be brought, or purchased at the University cafeteria. The swimming pool can be used after 2:00 p.m.

There will be no homework in this course; all learning is done in the laboratory.

What about fees, grades, and so on?

All necessary fees will be paid for by the project. No course credit will be given by the university, but each student's performance will be evaluated and a statement of his performance will be given to the school. The project is designed to permit the student to earn credit for both the first and the second year course, on successful completion of the second.

How come it's free?

We know that students learn with these courses. What we do not know is whether it will be found convenient or specially helpful for schools to make regular use of them for special situations. We hope that what we do this summer, and the way the students perform next year, will help to answer this question for the schools. The University is cooperating with an outside agency in supporting this effort.

Where to report? and when?

For the Spanish course, students will report to Room 212 in Fauver Hall on the River Campus of the University of Rochester, at 9:00 a.m. on Monday, June 26. Fauver Hall is the building between the tennis courts and the football stadium, and Room 212 is the large language laboratory on the second floor, at the far end of the building after you enter the campus from River Boulevard.

For the German course, students will go to Room 108, at the other end of the same building on the first floor.

Any other questions?

Please feel free to ask any questions that are not answered here, by telephoning me either at the University (473-3000, ext. 665) or at home (442-3013).

William H. Clark
Associate Professor of German
and Education
Project Director

June 14, 1967

APPENDIX C

STUDENT QUESTIONNAIRE, START OF PHASE ONE

(Here and in subsequent questionnaires repetitious or inappropriate comments have not been included.)

Please answer the following questions as carefully as you can. Make one or more responses, as indicated.

---

1. Have you studied a foreign language before?

No.	A-2
Yes, for 1-9 years.	B-15

2. If you have, do you feel foreign language courses are relatively easy for you (Circle ONE)

No.	A
Fairly easy.	B-12
Yes.	C-5

3. What is the main reason you decided to come to this summer course? (Circle ONE)

To satisfy a college entrance requirement.	A-1
To get a head start on a college language requirement.	B
I like learning languages.	C-6
It should be useful to me some day to know this language.	D-9
I had nothing else to do this summer.	E
I liked the idea of coming to the University of Rochester.	F
Other (state the other reason, if any).	G-2

First year German not offered in my school next year.

4. Do you expect the programmed course will be more enjoyable for you than a conventional language course would be? (Circle ONE).

No.	A
Probably not.	B
Fifty-fifty.	C-2
Probably yes.	D-12
Yes, definitely,	E-3

5. If you have taken a foreign language course (or courses) before, have you enjoyed doing it?

Yes.	A-14
No.	B
One (or some) yes, one (or some) no.	C-1

6. How do you feel about using tape recorders or other mechanical apparatus in connection with your course?

I am very uncomfortable with any kind of machine.	A
I like working with recorders and such.	B-11
It doesn't affect me one way or the other.	C-6

7. If you have a particular interest in the language you are going to study this summer, how would you explain why? (Circle all that apply)

Family background.	A-3
I have traveled where the language is spoken.	B-1
I would like to travel where the language is spoken.	C-10
Other family members have studied it in school or college.	D
I have read about the people who speak it.	E-3
Other reason (state it):	F-5

My uncle was stationed in Germany so I heard how great the country was; I thought I might enjoy learning German.

It may be useful to me in travels or with people I might meet.

My career may include a language requirement.

Many of my friends know and enjoy it.

My aunt lives in the Canary Islands, and so do several cousins. I would like to visit them.

8. How would you describe your objective in studying the language? (Circle all that apply)

I want to be able to communicate with people who speak it.	A-13
I want to be able to read the literature in the language.	B-5
I expect to have use for it in my profession or occupation.	C-6

APPENDIX D

STUDENT QUESTIONNAIRE, END OF PHASE ONE

You will help the project a great deal by answering these questions as frankly and carefully as you can. Make one or more responses for each item, by drawing a circle around one or more letters at the right, or as indicated.

---

1. What did you like best about this course? (Circle TWO)

The books.	A-1
The tape recordings.	B-4
The teacher's help.	C-4
Going as fast as I want.	D-3
Learning by myself.	E-9
No homework.	F-9
The tests.	G-2
Other:	H-2
Unlimited recess as long as I do the work.	
The whole process itself.	

2. What did you like least about this course? (Circle ONE or MORE)

The text materials.	A-1
Writing all the answers.	B-3
Listening to the tapes.	C-1
Not having a class.	D-6
The way the teacher helped.	E
The laboratory room.	F-1
The schedule.	G
Lack of homework.	H-2
The tests.	I-4
The headsets.	J-12
Something else?	K-1
Should have had more discussions.	

3. What would you say about the explanationswhich the program gave? (Circle ONE or MORE)

There were not enough of them.	A-4
There were enough.	B-2
There were too many.	C
They were too short.	D-3
They were too long.	E-1
They were very clear.	F-2
They were usually unclear.	G
They were sometimes clear, sometimes unclear.	H-13
They used too many grammatical terms.	I-6

In Spanish B it is sometimes hard to know what is being said because there are many forms of new verbs given and they are not explained.

4. Do you feel you should have been learning more about the people who speak the language?

Not necessarily, but I would have liked it.	A-7
I expect to get this later, in advanced courses.	B-8
I don't care too much one way or the other.	C-3

5. In what way would you feel most ready to <u>use</u> the language you have been studying this summer? Number the "ways" from <u>1</u> to <u>4</u>, with <u>1</u> as the strongest.

Understanding what people say	2
Speaking	3
Reading	1
Writing	4

6. You were told that no homework would be required. If you have done any outside work, what did it amount to? (Circle all that apply)

Talking with family and friends about the course.	A-13
Trying to memorize lists of words.	B-6
Using a dictionary.	C-1
Checking in a grammar book.	D-2
Other:	

Mostly checking pronunciation with my friends.
Talked German at home. (3 pupils)
Studying vocabulary notes. (2)
Simply reviewing the day's work before coming to class.

7. Do you think the tests used this summer showed you what you had or had not learned?

Yes, clearly.	A-12
Not at all.	B
More or less.	C-5

8. Do you think it would have been better to have shorter, more frequent tests? (Circle what applies)

Yes, more written tests.	A-2
Yes, more oral tests.	B-9
Yes, more with pictures.	C-2
Yes, more on grammar.	D-6
Yes, more on reading.	E-3
Yes, more on writing.	F-3
No, they should be fewer and more varied.	G-3

No, it was all right as it was. (3 pupils)

9. Do you think you would have preferred working with the program at school, instead of concentrating your work into a summer session?

Yes, definitely.	A-2
No.	B-12
Maybe.	C-3

10. Would you prefer to have group sessions along with the programmed text? (Circle ONE)

Yes, once a week.	A-7
No.	B-3
Yes, twice a week.	C-7
Yes, every two weeks.	D

11. What kind of extra sessions would you like? (Circle ALL that apply)

A chance to ask questions.	A-10
Guided conversational practice.	B-13
Oral quiz sessions.	C-5
Pronunciation drill.	D-5

12. Do you think students are likely to learn more from the programmed course if they are separated from other students?

Yes, I think most students would learn more by working alone.	A-1
Perhaps they work better alone, but they might lose interest.	B-4
No, probably small groups in the same room, like ours, are best.	C-12

13. If you were to take another course like this one, would you prefer to work in the same room with other students, or to be by yourself in a room or booth?

All in one room.	A-10
Separated.	B-1
It doesn't matter to me.	C-6

14. Do you think most students benefit from having a teacher present, while working through the programmed course? (Circle ALL that apply)

Yes, to answer questions.	A-17
Yes, to see that the students keep working.	B-4
Yes, to supplement the course in various ways.	C
Yes, to give tests.	D
Yes, to correct pronunciation.	E
Yes, to teach about the foreign culture.	F
No, a teacher is not really necessary.	G

15. Did you like the programmed course better than the usual language class? (Circle ONE)

Very much better.	A-11
A little better.	B-1
About the same.	C-1
A little less.	D
Much less.	E-2
Not at all.	F-1

16. What kind of course would you prefer to have as the continuation of the programmed course you have just finished?

Another programmed course.	A-2
A classroom course.	B-2
A course combining both program and class.	C-13

17. If you had to decide again about taking this course, what would be your reaction? (Circle ONE)

I would, definitely.	A-14
I might not.	B-2
I would certainly not.	C-1

18. Would you encourage other students to take the programmed course you just took, if it were offered at your school?

Encourage them to take it.	A-14
Tell them it was so-so.	B-2
Discourage them from taking it.	C-1

19. Have you any comments about the <u>equipment</u> used for this course?

The headsets were uncomfortable. (13 students)
Tape recorders sometimes didn't work properly. (2 students)
Pronunciation sometimes distorted on tape. (1 student)

20. Do you feel that the programmed course put you under any uncomfortable <u>pressure</u>? If so, can you suggest how to avoid this?

No. (12 students)
Yes. Less intensive course.
Yes. (4 students)

21. To improve this course, what would you do?

Improve the headsets. (3 students)
Teach some culture. (3 students)
Have regular group meetings. (3)
Use more than one speaker on the tapes. (1)
More grammar review. (2)
Vocabulary review after every ten units. (1)
Conversational practice. (2)
More frequent and concise explanations. (1)
Have some books on culture easily accessible. (1)

22. If you have any other comments or suggestions, please make them here.

This summer course was extremely concentrated and I noticed that I forgot things overnight. I had to, for example, review all of the articles each day. I don't believe junior or senior high students have the strength to follow and learn from a machine without a teacher to make certain they do the work. (This comment came from G-4, who finished Phase Two in a third-level course.)

I would like more conversations at normal speaking speed.

I think the programmed course is a great thing!

I liked the "not so competitive" atmosphere of this course.

Have a variety of voices.

I will remember this summer course as a rewarding experience, in the novel approach of a programmed course, and in the desire I have to continue learning Spanish.

I think, if used in school, that lab time should be at least two hours every other day; one hour a day tends to spread it out too much. I think one should hear it for a longer time than one hour.

I think a supplement can be added, toward the end of Spanish B; that is, a grammar lesson or a book charting verb tables, etc.

I wonder about the purpose of learning vocabulary such as monkey, fishbowl, and pineapple. There will hardly ever be any use for these words again. I think more grammar (rules) should be shown; thanks to my eight years of French I could figure out verb conjugations, etc. As a whole, I really enjoyed this program and am looking forward to continuing Spanish.

APPENDIX E

STUDENT QUESTIONNAIRE, END OF PHASE TWO

Please answer frankly and carefully. Make one or more responses for each item, by drawing a circle around one or more letters at the right, or as indicated.

---

1. Now that you have some perspective on your summer experience with programmed foreign language learning, what do you think was best about it? (Circle TWO)

The books.	A-2
The tape recordings.	B-7
The teacher's help.	C-3
Going as fast as I wanted to.	D-7
Learning by myself.	E-6
No homework.	F-1
The tests.	G-1
Other:	H-2

Emphasis on grammar.
The length of time; after four hours you really felt you learned something.

2. When you began your course in the fall, in what way did you find you were most ready to use the language you studied with the programmed course? (Number the "ways" from 1 to 4, with 1 as the strongest.)

Understanding what people say	2
Speaking	1
Reading	3
Writing	4

3. Did you have extra help with your course this year?

Yes.	A-6
No.	B-7

4. Did you feel you <u>needed</u> help?

No.	A-5
Yes, with grammar.	B-7
Yes, with vocabulary.	C-5
Yes, with pronunciation.	D-1
Other ways:	E-2

Maybe a little to make the program fit with the school program, but it really wasn't that hard.

5. Do you now think you would have been better off in your course this year if you had worked with the programmed course in school, instead of concentrating your work into a summer session?

Yes, definitely.	A-1
No.	B-9
Maybe.	C-3

6. Considering your experience, what would you say to other students about the programmed course you took last summer, if it were offered during the school year at your school?

Encourage them to take it.	A-11
Tell them it was so-so.	B-1
Discourage them from taking it.	C-1

7. Do you now have any regrets, or are you especially pleased about having had your start in Spanish or German through programmed learning? Please speak freely.

[The severest comment is from a student who barely passed the second-level course.] Since I went on to Spanish II instead of Spanish I, it has been very difficult to keep my grades up, although I haven't failed. Without help from [my teachers] I might not have passed. I would suggest this program to someone who is going on to Spanish I, instead of skipping it and going on to II, as I did.

[Possibly unintentional self-criticism rather than criticism of the programmed course.] Although the summer school course gave me a basic start in German, I feel that much more would be learned by taking a regular classroom course. More material would be absorbed and there would be a "check" on what the student is doing, while in the programmed course, a student is really "free" not to do his work. This would be a serious drawback in subsequent courses.

[This and the following statement have somewhat more than face value, it seems, inasmuch as they were given by pupils whose classroom performance was not high.] You should begin with conversation instead of the sentences that had nothing to do with conversation. I enjoyed the course and wish I could take it again. I like the programming instead of regular classes.

No, I don't have any whatsoever. It was a very organized way of teaching. And if anyone was offered the course I'd encourage them to take it. Although I would have liked to have learned more of the fundamentals of the German language (alphabet, grammar defined clearly, and some culture). I'm quite satisfied and hope to understand and learn German even more.

[Interesting comment from a high performer definitely favorable to the programmed course.] I felt that having previously taken French (since third grade) helped a lot. I don't think the programmed course would help anyone who was pushed into it. I think there must be a motivation to learn and a special interest in language. I do think it helped and I don't think I missed any huge hunks of grammar or conversation that I could not easily pick up. At the end of the summer I did wonder how the course would affect me in second year Spanish because of the novelty of the teaching methods. I often wondered what use the vocabulary (monkey, fishbowl, pineapple, etc.) would be, yet I do remember almost almost of it.

[This and the two following comments from pupils in Spanish are the most enthusiastic ones from that group.] I enjoyed concentrating the work into the summer session because I feel if I had taken the first year in school it would have been wasted. The course was excellent and I would like to have continued it for my next 2-3 years of Spanish. The only thing I regretted was the fact that there was too little conversation in the program. For instance, at the end, learning how one would communicate with someone from Spain.

I have no regrets. I am glad I took advantage of it. However, I'd like to see it expanded to cover the first and second years. It was a logical approach to learning a language. In the way I was taught French, I had the continual thought that I was not understanding; the way I learned Spanish, I would often do the right thing grammatically without thinking.

I am pleased to have begun Spanish in the programmed course. I feel that constantly listening to the teacher's voice, with its perfect accent, gave me a headstart in pronunciation and comprehension. The material was interesting enough to stimulate a desire to learn more Spanish between the end of the course and the beginning of the fall term. I kept up this interest and completed the second year course in January. I attribute my continuing interest in Spanish (I will take the 3rd year Regents in June) to the stimulating nature of the programmed course.

[The last four comments, from pupils in German, were uniformly enthusiastic about the self-instructional aspect of the programmed course.] My great regret is that I had to go back to a classroom to learn second year German. I have lost a great deal of the vocabulary I had last summer and am finding it difficult to learn new words. Also, I can understand things better in class than others (although not that much better) and it is extremely boring. The only real reason I stay in class is that I eat lunch with friends. Last summer was definitely better than this year in class.

I am really glad I got the chance to learn some German. I thought the program was excellent. I found that I could not adjust to classroom learning and that I learned a lot more with the program. The classroom learning went entirely too slowly. Once you start learning by yourself, you should continue to. A student who did program learning does not fit into a classroom.

I learned so much so easily and so fast this summer I thought it was a shame to stop the program then. I found that in the classroom the pace was much slower and it was very boring. I think students who are started in the program should be allowed to continue with it. The way of learning with the booklets and the tapes I now realize was excellent. I think that what I learned this way during the summer I have retained very well. It is much slower, much more boring and much harder to learn by regular classroom procedure.

I am especially pleased about having my start in German. I love to study languages and I found German particularly interesting. Also, I am going to be a foreign exchange student this summer and I am being sent to Germany. I feel that the course last summer will be a big boost to my understanding of German. I got much more out of the programmed learning than I could have dreamed. I feel that programmed learning is much better than having a teacher and I would definitely encourage anyone to take the course.

APPENDIX F

TEACHERS' COMMENTS ON INDIVIDUAL STUDENTS IN PHASE TWO

In this section are presented teachers' comments on the performance of individual project students in the second- or third-level course. The source of these characterizations is partly the project director's occasional contacts and interviews with the teachers, partly their responses to questions put to them at the end of Phase Two in the following form:

1. Compared to other students of similar aptitude, how well does this student perform now (at the end of the second-year course) with respect to:

	Poorly	Fairly Well	Adequately	Very Well
Vocabulary				
Use of grammar and syntax . . .				
Pronunciation				
Skill in listening comprehension				
General speaking skills				
Skill in reading comprehension .				
Writing skills				

2. How well do you think the programmed materials used last summer prepared this student for the second-level course?

   In respect to [as above]

3. Do you have any special comments about this student? If so, please add them below.

School A

S-1: The student was adequately prepared in all areas except vocabulary ("fair") and writing ("poor"), but was doing "very well" in all respects by the end of the year.

S-2: Adequately prepared in all respects except vocabulary and writing (both "fair"). By the end of the year, in the third-year course, was performing adequately in pronunciation, very well in all other areas.

S-3: Adequate preparation except in vocabulary ("fair") and writing ("poor"). At the end of the year, was doing at least adequately in all respects; "very well" in vocabulary and listening comprehension.

S-5: Student was fairly well prepared in vocabulary, grammar and reading, poorly in writing, adequately in speaking and listening comprehension. At the end of the year, "adequate" in listening, speaking, writing; doing "very well" in all other areas.

G-4: The student was judged very well prepared in all areas except vocabulary, grammar and writing (in all of these, "adequate"), and performed extremely well in the first term. Advanced to the third-level course at the middle of the school year, G-4 was doing very well in all areas; note that this is "compared to other students of similar aptitude."

School B

G-1: Prepared "fairly well" in reading; "adequately" in vocabulary, grammar and writing; "very well" in the other areas. By the end of the year, vocabulary, reading, writing only "fair," in other areas only "adequate." Student was unable, because of a schedule conflict, to engage in daily review during first term as others did; quality of work seemed to go down during second term when working in small group. [Student took alternate form of MLA-Cooperative Tests in listening, reading and writing in June 1968; scores corresponded to mid-percentile rankings of 79, 76 and 75 respectively when compared to a national sample of high school students at the end of the second year in audio-lingual courses.]

G-3: Adequately prepared in all respects; very well in listening and speaking, except for some "stumbling areas" in pronunciation and intonation, already apparent during the programmed course. The teacher would have liked to permit student to continue with a programmed course rather than in the classroom. [Mid-percentile rankings on MLA-Cooperative Tests in June, as for G-1: Listening 73, Reading 80, Writing 61.]

G-6: Only "fairly well" prepared in grammar and writing, but "adequately" in reading and "very well" in listening and speaking skills. At end of year, vocabulary was improved to "adequate" and reading comprehension to "very well"; otherwise competencies maintained as above. [MLA-Cooperative Test mid-percentile rankings, June 1968, as above: Listening 73, Reading 57, Writing 54.]

G-8: Adequately prepared in all areas, very well in speaking and listening comprehension; by the end of the year did very good work in vocabulary and reading. [MLA-Cooperative Test mid-percentile rankings, June 1968, as above: Listening 89, Reading 76, Writing 75.]

School C

G-2: Poorly prepared in speaking and writing skills, fairly well in other respects. At the end of the year had improved skill in reading comprehension to "adequate" with other ratings remaining the same. The teacher commented that G-2 is a poor speller even in English.

G-5: Was thought to be "adequately" prepared in vocabulary and reading comprehension, "very well" in all other respects. The ratings were the same at the end of the year except for listening comprehension, which had dropped to "adequate."

G-7: Fairly well prepared in vocabulary, adequately in pronunciation and reading, very well in all other respects. By year's end, however, performance in comparison with other students was "very good" only in listening and reading, "adequate" in speaking, and "fair" in all other respects.

School D

S-4: Judged adequately prepared only in pronunciation; at end of year still "adequate" in pronunciation, doing "fairly well" in all other areas. Teacher commented that this student "worked very hard--had extra tutoring . . . May I add, she thinks it was not worth the extra work, because she is still under a severe handicap even at the end of the year."

APPENDIX G

WORKSHOP PARTICIPANTS' QUESTIONNAIRE #1, START OF PHASE ONE

Programmed instruction in foreign language is not an either-or, black-and-white proposition. Some people, for example, are perfectly willing to consider short-term programmed materials, but would resist using such materials as whole-year or semester courses. Even among programmers, there is division of opinion as to whether it is even possible to "program" a foreign language course for self-instruction exclusively, without considerable help from a live teacher. These and similar considerations add up to a fair degree of ambiguity whenever the subject is discussed.

Probably all of the questions in the questionnaire are affected to some extent by the complexity of the problem just mentioned. Hopefully they have been phrased so that it is pretty clear what they really mean, and that they don't require too much time to answer. It is assumed you realize that we are talking primarily about whole-course self-instructional programs in elementary foreign language; that often your attitude toward using this technique depends largely on what the available alternatives are; that a great deal depends on the quality of the programmed materials themselves; and finally, that it is important, if the materials are to be used at all, that they be used intelligently and appropriately.

1. From what source(s) do you have knowledge about programmed learning? (Circle all that apply)

Reading professional and other literature.	A-4
Formal presentations by others (talks, etc.).	B-3
Informal reports.	C
Tryouts in other subjects in your school.	D
Direct experience (specify).	E-2
Attempts at working out a programmed sequence.	
Purdue University materials for laboratory.	

2. Have you heard of other situations where programmed learning of a foreign language was carried on in school?

No.	A-4
Yes. (If so, specify where, what language, what grade level, your assessment of success.)	B

3. From what you know now, how would you describe your attitude toward the use of programmed learning in secondary school, <u>in general</u>? (Place an "X" in the space along the scale which best corresponds to your attitude)

Very Favorable — Neutral — Against

4. From what you know now, would your attitude be different toward the use of programmed learning in <u>beginning foreign language courses</u>? (If so, put the "X" in the appropriate space along the scale below)

Very Favorable — Neutral — Against

5. Why do you think programmed instruction has <u>not</u> been used much in school foreign language courses as yet? (Circle any that apply)

Little evidence to support extravagant claims	A
Poor quality of many commercial programs	B
Attitude of persons who urge use of programs	C
School people haven't seen any need for it	D-2
Teachers see it as a threat	E-1
Lack of experience with it	F-4
Lack of information about it	G-4

6. What kind of evidence as to the effectiveness of a programmed foreign language course would carry most weight with you in deciding as to whether to use it? (Circle any that apply <u>and</u> indicate also their order of importance by putting the number <u>1</u> in the blank by the most important, <u>2</u> by the next, etc.)

Students' performance on school tests	3	A
Students' performance on standardized tests	1	B
Teacher's judgment	4	C
Outside expert's judgment of student performance	2	D
Other (specify)		E

7. Would you expect problems in scheduling your school, if you used a programmed course?

Yes, they might be insurmountable.	A
Yes, but they could be solved if we worked at it.	B-2
Yes, but the adjustment would not be difficult.	C-2
No problems.	D

8. Would you expect to make further use of programmed learning in foreign languages in your school, assuming this project is successful?

Yes, definitely.	A-2
Not sure.	B
Probably.	C-2

9. If you recommend that your school <u>purchase</u> programmed foreign language materials, do you think it would be

Soon enough that the teacher can have them for reference and study, and possible use next year.	A
In the fall, assuming a favorable report from teacher and students on the summer's work.	B-1
Next June, assuming general indications of the project's success.	C-1
After reading the final project report (October 1968), assuming it supports a judgment of the project's success.	D-2
After seeing more evidence of successful experience in other schools, including expert judgment.	E

10. In what ways can you imagine that programmed learning in foreign language might help in your school? (Please list briefly, in order of importance)

In individualized instruction; for acceleration, remedial work, drill; because of absence.

For initiating a uniform beginning German program.

More efficient utilization of teacher time; improved performance by under-achievers; better mastery of concepts and materials to be learned; improved motivation; slow learners can be helped to attain a higher level of mastery.

To encourage an audio-lingual approach. To assist students with difficulties in specific areas.

APPENDIX H

WORKSHOP PARTICIPANTS' QUESTIONNAIRE #2, END OF PHASE TWO

Assuming that you consider yourself better prepared to choose and/or use programmed learning materials as a result of having participated in the two workshops last summer, to what extent have the following contributed to your competence? (Indicate by placing an "X" on the scale for each one)

	Most Significant	Somewhat	Least Significant
Knowledge of sources of information as to available programs and research in the field	XX	X	X
Knowledge of criteria by which to judge programmed materials	X	X	XX
Acquaintance with several available programs	XX	XX	
Close familiarity with content and techniques used in a particular program	XXX	X	
Acquaintance with the literature and opportunity to profit by the experience of previous users	X	XX	X
Opportunity to observe and question students currently using programmed materials	XX	X	X
Acquaintance with "hardware" such as efi "notebooks," etc.	XX	X	X
Clearer understanding of rationale for programmed learning	XXXX		
The experience of writing and field testing a programmed unit	XXX	X	

Since the conclusion of the workshops, have you done, or are you planning to do, anything further with programmed learning? (Please check all that apply)

Have encouraged my school to use programmed learning	4
Have encouraged my school to use the programmed materials used by our students last summer	2
Have encouraged other teachers to use programmed materials	4
Have written or revised a programmed unit for use by my students	3
Intend to write such a unit	3
Have examined other programs in my field	3
Have sought out and examined other literature on programmed learning	3
Gave a presentation about programmed learning to school group(s)	1
Other (specify):	___

How much influence do you think the orientation (e.g., in our workshops) of the teacher is likely to have on the successful use of programmed learning?

Little	___
None at all	___
Considerable	3
Very much	1
Depends on the student (age, motivation, etc.)	___
Depends on the characteristics of the programmed materials used	___

Any Comments:

I exited from our first three weeks of PI classes feeling slightly confused (so much compressed theory!) and doubtful as to what PI really could offer in way of instruction advantages, specifically in language learning. The beauty of self-pacing and especially the superior motivational aspect due to PI's feature of continuous reinforcement really became apparent as I became engaged closely with a program in use.

From what you know now, how would you describe your attitude toward the use of programmed learning in beginning foreign language courses? (Place an "X" in the space along the scale which best corresponds to your attitude, and add any comments you wish).

Very Favorable — Neutral — Against

XXX X

Comments:

The enthusiasm of my five PI students regarding their experiences with the PI unit of last summer, measured in light of that German they actually learned and can still to a large part rely on and use, leaves me no doubt as to PI's effectiveness. I wonder if I did nearly as well with my beginners in the classroom?

What do you now see as legitimate obstacles to the use of programmed foreign language courses in secondary schools?

Lack of suitable programs 4

Quality of available programs 2

Too few teachers are familiar with programmed learning in general 4

Initial large expense 2

Space problems 1

Discrepancies in content between the usual beginning course and the programmed course 3

Other (specify)

Conventional language laboratories, as we are (to my dismay) installing in our new H.S. building, could be adaptable for use of programmed-instruction equipment. But the initial expense of conventional lab equipment can only preclude any chance of our acquiring programmed materials and reproduction equipment, at least in the immediate future.

There are no brief programs currently available for drill and remedial work in foreign languages, nor for . . . cultural material.

APPENDIX I

ADMINISTRATORS' QUESTIONNAIRE #1, START OF PHASE ONE

(This questionnaire and the next one were sent to the FL chairman in each of the four schools and to her administrative superior. One school had no FL chairman; one of the administrators replied only to the second questionnaire.)

Programmed instruction in foreign language is not an either-or, black-and-white proposition. Some people, for example, are perfectly willing to consider short-term programmed materials, but would resist using such materials as whole-year or semester courses. Even among programmers, there is division of opinion as to whether it is even possible to "program" a foreign language course for self-instruction exclusively, without considerable help from a live teacher. These and similar considerations add up to a fair degree of ambiguity whenever the subject is discussed.

Probably all of the questions in the questionnaire are affected to some extent by the complexity of the problem just mentioned. Hopefully they have been phrased so that it is pretty clear what they really mean, and that they don't require too much time to answer. It is assumed you realize that we are talking primarily about whole-course self-instructional programs in elementary foreign language; that often your attitude toward using this technique depends largely on what the available alternatives are; that a great deal depends on the quality of the programmed materials themselves; and finally, that it is important, if the materials are to be used at all, that they be used intelligently and appropriately.

1. From what source(s) do you have knowledge about programmed learning? (Circle all that apply)

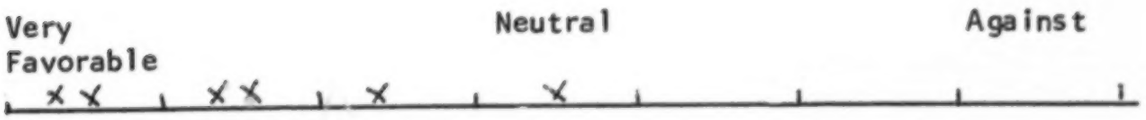
Reading professional and other literature	A-6
Formal presentations by others (talks, etc.)	B-5
Informal reports	C-3
Tryouts in other subjects in your school	D-2
Direct experience (specify)	E-3

The Analysis of Behavior, by Skinner, Course on programmed instruction.
Programmed General Science Project, 1962.
Spanish I, TEMAC. Tried it with selected group first year it was available.

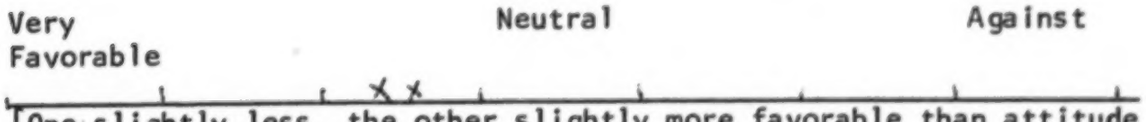
2. Have you heard of other situations where programmed learning of a foreign language was carried on in school?

No.	A-6
Yes. (If so, specify where, what language, what grade level, your assessment of success)	B

3. From what you know now, how would you describe your attitude toward the use of programmed learning in secondary school, <u>in general</u>? (Place an "X" in the space along the scale which best corresponds to your attitude)



4. From what you know now, would your attitude be different toward the use of programmed learning <u>in beginning foreign language courses</u>? (If so, put the "X" in the appropriate space along the scale below)



[One slightly less, the other slightly more favorable than attitude toward programmed learning in general.]

5. Why do you think programmed instruction has <u>not</u> been used much in school foreign language courses as yet? (Circle any that apply)

Little evidence to support extravagant claims	A-2
Poor quality of many commercial programs	B-3
Attitude of persons who urge use of programs	C
School people haven't seen any need for it	D-2
Teachers see it as a threat	E-2
Lack of experience with it	F-4
Lack of information about it	G-4

6. What kind of evidence as to the effectiveness of a programmed foreign language course would carry most weight with you in deciding as to whether to use it? (Circle any that apply <u>and</u> indicate also their order of importance by putting the number <u>1</u> in the blank by the most important, <u>2</u> by the next, etc.)

Students' performance on school tests	<u>3</u>	A
Students' performance on standardized tests	<u>1</u>	B
Teacher's judgment	<u>2</u>	C
Outside expert's judgment of student performance	<u>5</u>	D
Other (specify)	<u>4</u>	E

Data from post test based on instructional objectives.
Student performance in subsequent language instruction.
Degree of functional command of the language.

7. Would you expect problems in scheduling in your school, if you used a programmed course?

Yes, they might be insurmountable.	A-1
Yes, but they could be solved if we worked at it.	B-2
Yes, but the adjustment would not be difficult.	C-2
No problems.	D-1

8. Would you expect to make further use of programmed learning in foreign languages in your school, assuming this project is successful?

Yes, definitely	A-3
Not sure.	B-1
Probably.	C-2

9. If you recommend that your school <u>purchase</u> programmed foreign language materials, do you think it would be

Soon enough that the teacher can have them for reference and study, and possible use next year	A
In the fall, assuming a favorable report from teacher and students on the summer's work	B-1
Next June, assuming general indications of the project's success	C-1
After reading the final project report (October 1968), assuming it supports a judgment of the project's success	D-2
After seeing more evidence of successful experience in other schools, including expert judgment	E-1

10. In what ways can you imagine that programmed learning in foreign language might help in your school? (Please list briefly, in order of importance)

Better first year basis on which to build later study.

Make 3 years of a language possible for students who make a "late" decision about college; self-screening device for "curious" students.

Absorption into our program [6-year or 10-year sequence] of students who come to us after grade 7 without previous FL experience; acceleration of highly motivated students.

[Also see Appendix J, question 2.]

APPENDIX J

ADMINISTRATORS' QUESTIONNAIRE #2,
END OF PHASE TWO

1. Do you feel that this project has contributed to your knowledge about programmed instruction in foreign languages? (Check one)

No	____
Yes, significantly	1
Somewhat	6
Not much	____

2. Judging by this year's experience and by current needs of your school: in which, if any, of the following ways would you recommend that your school offer a programmed foreign language course at this time? (Check all that apply)

Beginning course for individual students or a group smaller than minimum class size	5
Alternative course to allow slow student to go at his own pace, with some help from a teacher	3
Alternative course for highly motivated and gifted students, as self-instruction primarily	7
Alternative course when scheduling prevents student from enrolling in classroom course	4
Alternative "repeat" course for students unsuccessful in regular introductory course	3
To provide the teacher with time for individualized and advanced instruction, by freeing him from mechanical drill	4
Home study course for students who are ill or otherwise handicapped	5
To relieve teacher shortage by enabling one teacher to supervise a larger number of students than he could teach in the classroom	____
Individual study for disadvantaged students who do not respond well to competitive classroom situation	3
Other (specify):	____

3. From what you know now, how would you describe your attitude toward the use of programmed learning in beginning foreign language courses? (Place an "X" in the space along the scale which best corresponds to your attitude, and add any comments you wish).

Very Favorable — Neutral — Against

XX	XXX	X X				

Comments:

As the need for individualized instruction increases, this type of training will be of tremendous value.

Only with teacher guidance and alternate instruction.

The success of our students leaves no other choice, the program has opened up new horizons for them.

4. What do you now see as legitimate obstacles to the use of programmed foreign language courses in secondary schools?

Lack of suitable programs	5
Quality of available programs	2
Too few teachers are familiar with programmed learning in general	6
Initial large expense	3
Space problems	2
Discrepancies in content between the usual beginning course and the programmed course	4
Other (specify)	1

Tight schedule and assigned teacher-duties

APPENDIX K

WORKSHOP PARTICIPANTS' ASSESSMENT OF PROGRAMMED COURSES IN RELATION TO SCHOOL REQUIREMENTS

After reviewing the content of the Ellert, Ellert and Sullivan German A, the German teachers participating in the workshop judged the program adequate to prepare students for the second-year course in their schools. They commented especially on the "thorough and systematic review of material, both immediate and delayed," and on the "ample practice and good balance of the four skills: listening, speaking, reading, writing" provided by the program. They did note some discrepancies, and suggested that attention be given to these:

I. Vocabulary and general expressions; general expansion necessary in the following areas:

- A. family relations
- B. seasons and weather
- C. travel and geographic terminology (tickets, directions)
- D. parts of the human body and clothing
- E. dwelling: furniture, rooms
- F. greetings: introductions, personal inquiries, etc.
- G. dining: foods, mealtimes, ordering in a restaurant
- H. shopping
- I. other basic situations: lodgings, post office, doctor, telephone, letters

II. Structures

A. Verbs

1. strong, all tenses
2. future tense
3. separable-prefix verbs
4. the modals dürfen, mögen, sollen, wollen
5. familiar forms

B. Prepositions

1. Genitive: all
2. Accusative: bis, wider
3. Dative: bei, seit
4. da- and wo- compounds

C. Conjunctions

1. denn
2. sondern

III. Culture: basic introduction to art, literature, history.

The Spanish teachers compared Sapon's Spanish A and Spanish B with the New York State syllabus for Level I and with the first-level texts used in their schools. Their opinion was that "given the length of the program, too much emphasis is placed on the sound patterns, while reading and writing . . . are given relatively little attention." They judged that the program represents "between two-thirds and three-fourths of a complete Level I course, as recommended by the New York State syllabus," and that "strictly on the basis of this program, students are not adequately prepared to go on to the usual Regents-type Level II course." They listed the following syllabus items as "omitted from the Sapon materials":

Articles
  Use with titles
  Omission after hablar with languages
  Omission with profession, days, seasons
cuál(es) + ser

Possessive adjectives, tu, tus

Adverbs

quisiera

Negatives
  no . . . nada

Regular present participles

Preterites of irregular verbs

para + infinitive

había

Future

gustar (preterite)

Irregular verbs
  oír
  ver
  conocer

Radical-changing verbs
  sentarse
  volver
  perder
  cerrar
  encontrar
  entender
  empezar
  jugar

Demonstrative adjectives
  aquel